



SURFACE-MOUNT POWER INDUCTORS

ASPI -0401, -0403, -0504, -0602, -0703, -0705, -1004, -1005 SERIES

STANDARD SPECIFICATIONS

| Part Number # -XXX | L ^{1,2} (μH) | DCR Ω (MAX) | | | | | | | | I _{bc} ⁴ A (MAX) | | | | | | | |
|--------------------|-----------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | ASPI 0401 | ASPI 0403 | ASPI 0504 | ASPI 0602 | ASPI 0703 | ASPI 0705 | ASPI 1004 | ASPI 1005 | ASPI 0401 | ASPI 0403 | ASPI 0504 | ASPI 0602 | ASPI 0703 | ASPI 0705 | ASPI 1004 | ASPI 1005 |
| 1R0 | 1.0 | - | 0.033 | - | - | - | - | - | - | - | 3.80 | - | - | - | - | - | - |
| 1R4 | 1.4 | - | 0.038 | - | - | - | - | - | - | - | 3.30 | - | - | - | - | - | - |
| 1R8 | 1.8 | - | 0.042 | - | - | - | - | - | - | - | 2.91 | - | - | - | - | - | - |
| 2R2 | 2.2 | - | 0.047 | - | 0.065 | - | - | - | - | - | 2.60 | - | 3.00 | - | - | - | - |
| 2R7 | 2.7 | - | 0.052 | - | 0.075 | - | - | - | - | - | 2.43 | - | 2.60 | - | - | - | - |
| 3R3 | 3.3 | - | 0.080 | - | 0.058 | - | - | - | - | - | 2.15 | - | 2.40 | - | - | - | - |
| 3R9 | 3.9 | - | 0.076 | - | 0.090 | - | - | - | - | - | 1.98 | - | 2.25 | - | - | - | - |
| 4R7 | 4.7 | 0.12 | 0.094 | - | 0.100 | - | - | - | - | 0.80 | 1.70 | - | 2.10 | - | - | - | - |
| 5R6 | 5.6 | 0.14 | 0.101 | - | 0.105 | - | - | - | - | 0.75 | 1.60 | - | 1.90 | - | - | - | - |
| 6R8 | 6.8 | 0.15 | 0.117 | - | 0.110 | - | - | - | - | 0.70 | 1.41 | - | 1.85 | - | - | - | - |
| 8R2 | 8.2 | 0.17 | 0.123 | - | 0.120 | - | - | - | - | 0.65 | 1.26 | - | 1.70 | - | - | - | - |
| 100 | 10 | 0.25 | 0.182 | 0.10 | 0.140 | 0.08 | 0.07 | 0.05 | 0.06 | 0.60 | 1.15 | 1.44 | 1.55 | 1.44 | 2.30 | 2.38 | 2.60 |
| 120 | 12 | 0.28 | 0.235 | 0.12 | 0.150 | 0.09 | 0.08 | 0.06 | 0.07 | 0.56 | 1.05 | 1.44 | 1.40 | 1.39 | 2.00 | 2.13 | 2.45 |
| 150 | 15 | 0.33 | 0.338 | 0.14 | 0.170 | 0.10 | 0.09 | 0.07 | 0.08 | 0.50 | 0.92 | 1.30 | 1.32 | 1.24 | 1.80 | 1.87 | 2.27 |
| 180 | 18 | 0.40 | 0.378 | 0.15 | 0.180 | 0.11 | 0.10 | 0.08 | 0.09 | 0.48 | 0.84 | 1.23 | 1.20 | 1.12 | 1.60 | 0.73 | 2.15 |
| 220 | 22 | 0.45 | 0.522 | 0.18 | 0.200 | 0.13 | 0.11 | 0.09 | 0.10 | 0.41 | 0.76 | 1.11 | 1.05 | 1.07 | 1.50 | 1.60 | 1.95 |
| 270 | 27 | 0.80 | 0.540 | 0.20 | 0.300 | 0.15 | 0.12 | 0.10 | 0.11 | 0.35 | 0.71 | 0.97 | 0.97 | 0.94 | 1.30 | 1.44 | 1.76 |
| 330 | 33 | 0.85 | 0.587 | 0.23 | 0.350 | 0.17 | 0.13 | 0.12 | 0.12 | 0.32 | 0.64 | 0.88 | 0.86 | 0.85 | 1.20 | 1.26 | 1.50 |
| 390 | 39 | 0.95 | 0.844 | 0.32 | 0.400 | 0.22 | 0.16 | 0.15 | 0.14 | 0.30 | 0.59 | 0.80 | 0.80 | 0.74 | 1.10 | 1.20 | 1.37 |
| 470 | 47 | 1.08 | 0.937 | 0.37 | 0.600 | 0.25 | 0.18 | 0.17 | 0.17 | 0.28 | 0.54 | 0.72 | 0.70 | 0.68 | 1.10 | 1.10 | 1.28 |
| 560 | 56 | 1.20 | 1.117 | 0.42 | 0.700 | 0.28 | 0.24 | 0.20 | 0.19 | 0.26 | 0.50 | 0.68 | 0.65 | 0.64 | 0.94 | 1.01 | 1.17 |
| 680 | 68 | 1.35 | - | 0.46 | 0.800 | 0.33 | 0.28 | 0.22 | 0.22 | 0.24 | - | 0.61 | 0.60 | 0.59 | 0.85 | 0.91 | 1.11 |
| 820 | 82 | 1.50 | - | 0.60 | 0.900 | 0.41 | 0.37 | 0.25 | 0.25 | 0.22 | - | 0.58 | 0.54 | 0.54 | 0.78 | 0.85 | 1.00 |
| 101 | 100 | 2.00 | - | 0.70 | 1.000 | 0.48 | 0.43 | 0.34 | 0.35 | 0.20 | - | 0.52 | 0.47 | 0.51 | 0.72 | 0.74 | 0.97 |
| 121 | 120 | 2.20 | - | 0.93 | 1.100 | 0.54 | 0.47 | 0.40 | 0.40 | 0.18 | - | 0.48 | 0.41 | 0.49 | 0.66 | 0.69 | 0.89 |
| 151 | 150 | 3.80 | - | 1.10 | 1.200 | 0.75 | 0.64 | 0.54 | 0.47 | 0.15 | - | 0.40 | 0.35 | 0.40 | 0.58 | 0.61 | 0.78 |
| 181 | 180 | 4.00 | - | 1.38 | - | 1.02 | 0.71 | 0.62 | 0.63 | 0.14 | - | 0.38 | - | 0.36 | 0.51 | 0.56 | 0.72 |
| 221 | 220 | 4.50 | - | 1.57 | - | 1.20 | 0.96 | 0.72 | 0.73 | 0.12 | - | 0.35 | - | 0.31 | 0.49 | 0.53 | 0.66 |
| 271 | 270 | 5.20 | - | - | - | 1.31 | 1.11 | 0.95 | 0.97 | 0.10 | - | - | - | 0.29 | 0.42 | 0.45 | 0.57 |
| 331 | 330 | - | - | - | - | 1.50 | 1.26 | 1.10 | 1.15 | - | - | - | - | 0.28 | 0.40 | 0.42 | 0.52 |
| 391 | 390 | - | - | - | - | 1.77 | 1.24 | 1.30 | - | - | - | - | - | - | 0.36 | 0.38 | 0.48 |
| 471 | 470 | - | - | - | - | 1.96 | 1.53 | 1.48 | - | - | - | - | - | - | 0.34 | 0.35 | 0.42 |
| 561 | 560 | - | - | - | - | - | 1.90 | 1.90 | - | - | - | - | - | - | - | 0.32 | 0.33 |
| 681 | 680 | - | - | - | - | - | - | 2.25 | - | - | - | - | - | - | - | - | 0.28 |
| 821 | 820 | - | - | - | - | - | - | 2.55 | - | - | - | - | - | - | - | - | 0.24 |

NOTES:

1. Inductance (L) measured @ 100 KHz, 100 mV with 0 DC bias
2. Inductance (L) tolerance: J = 5%, K = 10%, M = 20%
3. Operating temperature: -55°C to 85°C
4. Inductance drops by 10% at max rated current
5. Marking per EIA standard color code in nH
6. Dimensions: inches / mm; see spec sheet for tolerance limits
7. Specifications subject to change without notice



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SURFACE-MOUNT POWER INDUCTORS

ASPI -0401, -0403, -0504, -0602, -0703, -0705, -1004, -1005 SERIES



PHYSICAL CHARACTERISTICS ⁶

| Part Number | A | B | C | D | Figure |
|-------------|------------------|-----------------|-----------------|-------------|--------|
| ASPI-0401 | 0.185 (4.7±0.2) | 0.185 (4.7±0.2) | 0.11 (2.8 Max) | 0.125 (3.2) | 1 |
| ASPI-0403 | 0.18 (4.5±0.015) | 0.16 (4.0±0.3) | 0.18 (3.2±0.3) | 0.05 (1.2) | 2 |
| ASPI-0504 | 0.23 (5.8±0.3) | 0.21 (5.2±0.3) | 0.18 (4.5±0.4) | 0.05 (1.2) | 2 |
| ASPI-0602 | 0.267 (6.8±0.2) | 0.267 (6.8±0.2) | 0.157(4.0 Max) | 0.20 (5.0) | 1 |
| ASPI-0703 | 0.31 (7.8±0.3) | 0.28 (7.0±0.3) | 0.14 (3.5±0.5) | 0.08 (2.1) | 2 |
| ASPI-0705 | 0.31 (7.8±0.3) | 0.28 (7.0±0.3) | 0.20 (5.0±0.5) | 0.08 (2.1) | 2 |
| ASPI-1004 | 0.40 (10.0±0.3) | 0.35 (9.0±0.3) | 0.17 (4.25±0.5) | 0.08 (2.1) | 2 |
| ASPI-1005 | 0.40 (10.0±0.3) | 0.35 (9.0±0.4) | 0.21 (5.4±0.4) | 0.08 (2.1) | 2 |

Figure 1

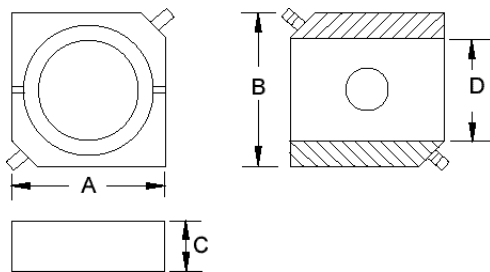
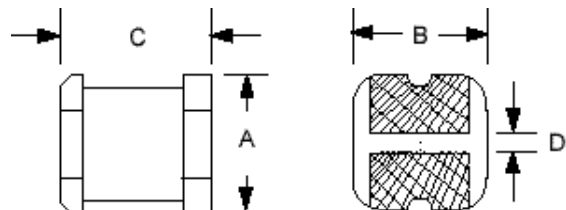


Figure 2



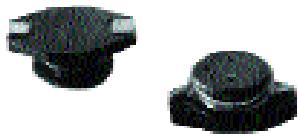
NOTES:

1. Inductance (L) measured @ 100 KHz, 100 mV with 0 DC bias
2. Inductance (L) tolerance: J = 5%, K = 10%, M = 20%
3. Operating temperature: -55°C to 85°C
4. Inductance drops by 10% at max rated current
5. Marking per EIA standard color code in nH
6. Dimensions: inches / mm; see spec sheet for tolerance limits
7. Specifications subject to change without notice

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SURFACE-MOUNT POWER INDUCTORS

ASPI -0403C, -0603, -0603C, -0703C SERIES

STANDARD SPECIFICATIONS

| Part Number ² # -XXX | L ^{1,2} (μ H) | DCR Ω (MAX) | | | | Test Frequency KHz | | | | I _{DC} ⁴ A (MAX) | | | |
|------------------------------------|--------------------------------|--------------------|--------------|---------------|---------------|--------------------|--------------|---------------|---------------|--------------------------------------|--------------|---------------|---------------|
| | | ASPI 0403C | ASPI 0603 | ASPI 0603C | ASPI 0703C | ASPI 0403C | ASPI 0603 | ASPI 0603C | ASPI 0703C | ASPI 0403C | ASPI 0603 | ASPI 0603C | ASPI 0703C |
| 1R0M | 1.0 | - | 0.050 | 0.045 | - | - | 100 | 100 | - | - | 2.9 | 2.21 | - |
| 1R5M | 1.5 | - | 0.065 | 0.050 | - | - | 100 | 100 | - | - | 2.5 | 1.80 | - |
| 2R2M | 2.2 | - | 0.075 | 0.060 | - | - | 100 | 100 | - | - | 2.1 | 1.49 | - |
| 3R3M | 3.3 | - | 0.085 | 0.070 | 0.039 | - | 100 | 100 | 1 | - | 1.7 | 1.21 | 1.90 |
| 4R7M | 4.7 | 0.05 | 0.110 | 0.080 | 0.043 | 7960 | 100 | 100 | 1 | 1.20 | 1.4 | 1.02 | 1.70 |
| 6R8M | 6.8 | - | 0.140 | 0.085 | 0.049 | - | 100 | 100 | 1 | - | 1.2 | 0.84 | 1.60 |
| 100M | 10 | 0.09 | 0.160 | 0.095 | 0.064 | 2520 | 100 | 100 | 1 | 0.92 | 1.0 | 0.70 | 1.40 |
| 120M | 12 | 0.12 | - | - | - | - | - | - | - | 0.82 | - | - | - |
| 150M | 15 | 0.16 | 0.250 | 0.135 | 0.105 | 2520 | 100 | 100 | 1 | 0.75 | 0.80 | 0.57 | 1.10 |
| 180M | 18 | 0.20 | - | - | - | - | - | - | - | 0.68 | - | - | - |
| 220M | 22 | 0.25 | 0.370 | 0.160 | 0.132 | 2520 | 100 | 100 | 1 | 0.63 | 0.68 | 0.47 | 0.96 |
| 270M | 27 | 0.32 | - | - | - | - | - | - | - | 0.58 | - | - | - |
| 330M | 33 | 0.39 | 0.510 | 0.275 | 0.192 | 2520 | 100 | 100 | 1 | 0.52 | 0.54 | 0.38 | 0.75 |
| 390M | 39 | 0.45 | - | - | - | - | - | - | - | 0.47 | - | - | - |
| 470M | 47 | 0.51 | 0.650 | 0.340 | 0.288 | 2520 | 100 | 100 | 1 | 0.43 | 0.45 | 0.32 | 0.67 |
| 560M | 56 | 0.60 | - | - | - | - | - | - | - | 0.40 | - | - | - |
| 680M | 68 | 0.68 | 0.870 | 0.575 | 0.316 | 2520 | 100 | 100 | 1 | 0.37 | 0.38 | 0.26 | 0.59 |
| 101M | 100 | 0.70 | 1.30 | 1.10 | 0.540 | 1 | 100 | 100 | 1 | 0.30 | 0.30 | 0.22 | 0.45 |
| 151M | 150 | - | 1.95 | 1.40 | 0.780 | - | 100 | 100 | 1 | - | 0.25 | 0.18 | 0.37 |
| 221M | 220 | - | 2.60 | 2.25 | 1.26 | - | 100 | 100 | 1 | - | 0.20 | 0.15 | 0.29 |
| 331M | 330 | - | 3.80 | 2.90 | 2.00 | - | 100 | 100 | 1 | - | 0.17 | 0.12 | 0.22 |
| 471M | 470 | - | 5.10 | 3.60 | 2.46 | - | 100 | 100 | 1 | - | 0.14 | 0.10 | 0.20 |
| 681M | 680 | - | 8.00 | 4.55 | 3.78 | - | 100 | 100 | 1 | - | 0.12 | 0.08 | 0.16 |
| 102M | 1000 | 10.0 | 14.0 | 8.10 | 5.74 | 1 | 100 | 100 | 1 | 0.12 | 0.09 | 0.07 | 0.13 |

NOTES:

1. Inductance (L) measured @ noted frequencies with 0 DC bias
2. Inductance (L) tolerance: J = 5%, K = 10%, M = 20%
3. Operating temperature: -55°C to 85°C
4. Inductance drops by 10% at max rated current
5. Marking per EIA standard color code in μ H
6. Dimensions: inches / mm; see spec sheet for tolerance limits
7. Specifications subject to change without notice

SURFACE-MOUNT POWER INDUCTORS

ASPI -0403C, -0603, -0603C, -0703C SERIES



| Part Series | PHYSICAL CHARACTERISTICS ⁶ | | |
|-------------|---------------------------------------|--|--|
| ASPI-0403C | | | |
| ASPI-0603 | | | |
| ASPI-0603C | | | |
| ASPI-0703C | | | |

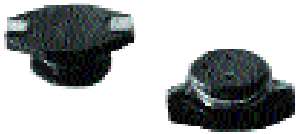
NOTES:

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SURFACE-MOUNT POWER INDUCTORS

ASPI -0402T, -0802T, -0804T, -0810T, - 1109T, -1306T SERIES

STANDARD SPECIFICATIONS

| Part Number # -XXX | L ^{1,2} (μH) | DCR Ω (MAX) | | | | | | I _{DC} ⁴ A (MAX) | | | | | |
|--------------------|-----------------------|-------------|------------|------------|------------|------------|------------|--------------------------------------|------------|------------|------------|------------|------------|
| | | ASPI 0402T | ASPI 0802T | ASPI 0804T | ASPI 0810T | ASPI 1109T | ASPI 1306T | ASPI 0402T | ASPI 0802T | ASPI 0804T | ASPI 0810T | ASPI 1109T | ASPI 1306T |
| 1R0M | 1.0 | 0.05 | - | 0.009 | - | - | 0.011 | 2.90 | - | 9.0 | - | - | 8.60 |
| 1R5M | 1.5 | 0.05 | - | 0.010 | - | - | - | 2.60 | - | 8.0 | - | - | - |
| 2R2M | 2.2 | 0.06 | - | 0.012 | - | - | 0.014 | 2.30 | - | 7.0 | - | - | 7.10 |
| 3R3M | 3.3 | 0.07 | - | 0.015 | - | - | 0.016 | 2.00 | - | 6.4 | - | - | 6.20 |
| 4R7M | 4.7 | 0.08 | - | 0.018 | - | - | - | 1.50 | - | 5.4 | - | - | - |
| 5R6M | 5.6 | - | - | - | - | - | 0.022 | - | - | - | - | - | 5.30 |
| 6R8M | 6.8 | 0.11 | - | 0.027 | - | - | - | 1.20 | - | 4.6 | - | - | - |
| 100M | 10 | 0.14 | 0.09 | 0.038 | 0.033 | 0.06 | 0.032 | 1.10 | 2.00 | 3.8 | 3.50 | 3.50 | 4.30 |
| 120M | 12 | - | - | - | - | 0.07 | - | - | - | - | - | 3.40 | - |
| 150M | 15 | 0.20 | 0.12 | 0.046 | 0.042 | 0.08 | 0.036 | 0.90 | 1.50 | 3.0 | 3.00 | 3.10 | 4.00 |
| 180M | 18 | - | - | - | - | 0.09 | - | - | - | - | - | 3.00 | - |
| 220M | 22 | 0.32 | 0.19 | 0.085 | 0.054 | 0.10 | 0.047 | 0.70 | 1.30 | 2.6 | 2.50 | 2.60 | 3.50 |
| 270M | 27 | - | - | - | - | 0.11 | - | - | - | - | - | 2.40 | - |
| 330M | 33 | 0.44 | 0.25 | 0.1 | 0.08 | 0.12 | 0.066 | 0.58 | 1.10 | 2.0 | 2.00 | 2.30 | 3.00 |
| 390M | 39 | - | - | - | - | 0.14 | - | - | - | - | - | 2.10 | - |
| 470M | 47 | 0.56 | 0.32 | 0.14 | 0.10 | 0.17 | 0.087 | 0.50 | 0.80 | 1.6 | 1.60 | 1.95 | 2.60 |
| 560M | 56 | - | - | - | - | 0.19 | - | - | - | - | - | 1.85 | - |
| 680M | 68 | 0.75 | 0.55 | 0.20 | 0.17 | 0.22 | 0.13 | 0.40 | 0.70 | 1.4 | 1.20 | 1.65 | 2.30 |
| 820M | 82 | - | - | - | - | 0.25 | - | - | - | - | - | 1.50 | - |
| 101M | 100 | 1.10 | 0.70 | 0.28 | 0.22 | 0.35 | 0.19 | 0.31 | 0.60 | 1.2 | 1.20 | 1.40 | 1.80 |
| 121M | 120 | - | - | - | - | 0.40 | - | - | - | - | - | 1.30 | - |
| 151M | 150 | 1.70 | 1.00 | 0.40 | 0.34 | 0.47 | 0.25 | 0.27 | 0.50 | 1.0 | 0.90 | 1.20 | 1.50 |
| 181M | 180 | - | - | - | - | 0.63 | - | - | - | - | - | 1.00 | - |
| 221M | 220 | 2.30 | 1.60 | 0.61 | 0.44 | 0.73 | 0.38 | 0.22 | 0.40 | 0.8 | 0.70 | 0.95 | 1.20 |
| 271M | 270 | - | - | - | - | 0.97 | - | - | - | - | - | 0.90 | - |
| 331M | 330 | 3.30 | 2.20 | 1.02 | 0.70 | 1.15 | 0.56 | 0.18 | 0.30 | 0.6 | 0.60 | 0.80 | 1.00 |
| 391M | 390 | - | - | - | - | 1.30 | - | - | - | - | - | 0.75 | - |
| 471M | 470 | 4.40 | 3.30 | 1.27 | 0.95 | 1.48 | 0.85 | 0.16 | 0.20 | 0.5 | 0.30 | 0.65 | 0.82 |
| 561M | 560 | - | - | - | - | 1.90 | - | - | - | - | - | 0.60 | - |
| 681M | 680 | 6.80 | 4.40 | 2.02 | 1.20 | 2.45 | 1.2 | 0.14 | 0.10 | 0.4 | 0.20 | 0.50 | 0.72 |
| 821M | 820 | - | - | - | - | 2.55 | - | - | - | - | - | 0.48 | - |
| 102M | 1000 | 12.00 | 7.00 | 3.00 | 2.00 | 3.00 | 1.8 | 0.10 | 0.05 | 0.3 | 0.10 | 0.46 | 0.56 |
| 122M | 1200 | - | - | - | - | 3.50 | - | - | - | - | - | 0.35 | - |

NOTES:

1. Inductance (L) measured @ 100KHz, 100mV with 0 DC bias
2. Inductance (L) tolerance: J = 5%, K = 10%, M = 20%
3. Operating temperature: -55°C to 85°C
4. Inductance drops by 10% at max rated current
5. Marking per EIA standard color code in μH
6. Dimensions: inches / mm; see spec sheet for tolerance limits
7. Specifications subject to change without notice



SURFACE-MOUNT POWER INDUCTORS

ASPI -0402T, -0802T, -0804T, -0810T, - 1109T, -1306T SERIES



| Part Series | PHYSICAL CHARACTERISTICS ⁶ |
|----------------|---------------------------------------|
| ASPI-0402T-XXX | |
| ASPI-0802T-XXX | |
| ASPI-0804T-XXX | |
| ASPI-0810T-XXX | |
| ASPI-1109T-XXX | |
| ASPI-1306T-XXX | |

NOTES:

1. Inductance (L) measured @ 100KHz, 100mV with 0 DC bias
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